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NATIONAL WAR COLLEGE

**VON PAPE *ON AIRPOWER* MEETS *AIRPOWER FOR DUMMIES*: A COMPARATIVE
REVIEW OF ROBERT PAPE'S *BOMBING TO WIN* AND JOHN WARDEN III'S *AIR
CAMPAIGN***

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**VON PAPE *ON AIRPOWER* MEETS *AIRPOWER FOR DUMMIES*: A COMPARATIVE
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Robert A. Pape. *Bombing to Win, Air Power and Coercion in War*, (Ithaca: Cornell University Press, 1996. Pp. v, 358. Appendix, notes, index.).

Colonel John A Warden III, *The Air Campaign, Planning for Combat*, (Washington: Pergamon-Brassey's, 1989. Pp ix, 143. Notes, index.), pg 10.

INTRODUCTION

This paper will present a comparative review of two books both intended to describe successful methods for employing air power. Despite the similar goal, the books are designed for different audiences. Pape's, *Bombing to Win*, while informative to policymakers, is intended as a first step for social scientists to begin the study of the use of military coercion. Warden's, on the other hand, is aimed primarily at those who will be in a position to plan and conduct an air campaign.

Both books rely heavily on information from secondary sources, but their approach to the issues varies greatly. Pape presents his theory of coercion and examines case studies from the use of air power in the 20th century to support that theory. Warden uses historical information as well, but his approach is to describe the roles of air power and provide guidelines on how to use them.

Despite the two different audiences and methods, if one looks closely, both books come to some surprisingly similar conclusions. Conversely, they have some starkly contrasting views as well. Warden is clearly a proponent of air power and sees its utility in many different uses. Conversely, Pape sees the only valid use of air power as being attacks on fielded forces and

vehemently defends that position. Now, turning to the books individually to examine their arguments in more detail.

Pape and *Bombing to Win*

Pape argues that the effective use of air power, at least in non-nuclear wars, is not to threaten civilians, but rather to exploit military vulnerabilities. Pape's goal is to present his theory of coercion, to wit, that it is the threat of military failure (or, as he calls it "denial") and not the threat of civilian casualties (punishment) which creates successful conventional coercion. He then proposes to test this theory against 20th century air campaigns.

Definition

Pape defines coercion as efforts to change the behavior of a state by manipulating costs and benefits. National War College graduates will recognize this as the definition more closely associated with compellence.

As Pape prepares to defend his theory of coercion, he makes a serious mistake that adversely impacts his thesis a great deal of the rest of the book. In creating a definition for the success or failure of coercion he defines failed coercion as stopping prior to the target state making concessions. Additionally, by his definition, coercion fails if the target is completely defeated prior to making the desired changes. While one may not be able to dispute this definition purely on the grounds of semantics, in terms of warfighting, it is lacking. What this definition says is that coercion fails if it does not win the war. This is essentially the search for a "silver bullet" for which Pape attacks air power advocates. The real question should be whether the coercive strategy and its execution make a contribution to the strategic goals. Was it easier to win that complete military victory because of the coercive bombing? If so, it can't reasonably be classified as a total failure. To use an analogy, would anyone do a study that determined that

dismounted infantry won battles, not artillery or armor and then propose we stop using artillery and armor because dismounted infantry wins battles?

His strong points are the case studies on Japan and Iraq and are worthy of comment and representative of his position.

Case Study – Japan

Pape begins his case studies by examining the U.S. strategic bombing campaign against Japan in World War II. He makes the case that the strategic bombing campaign against Japan was ineffective and unnecessary. Rather, he contends that the naval blockade, Soviet intervention and threat of invasion of the home islands were all that was needed to end the war. Indeed the straw that broke the camel's back was the August 9, 1945 Soviet invasion of Manchuria.

This view seems exceedingly narrow. Pape claims that the submarine blockade had so interdicted raw supplies that Japanese war production was at 30 percent of its potential. He asserts that all the B-29s did was to bounce the rubble of the already destroyed Japanese economy. Surely, however, the strategic attacks destroyed some of that remaining 30%. Even if aircraft engine production was limited to 100 per month (as Pape details), it is prudent to attempt to further lower that number rather than allow the Japanese to build 100 airplanes per month, 1,200 per year. Additionally, having the post-war awareness of Japanese production capability is different than dealing with the limited information in wartime. Given the reduced wartime awareness, destroying the factories that might use those materials seems like a commonsensical and prudent approach that should have been pursued when the capability existed.

Aside from the post-war analysis of whether bombing mainland Japan had any effect on the war, it would be interesting to note the possible effects on Japanese leaders' decisions during the

war. In 1942, Lieutenant Colonel James Dolittle led sixteen B-25 medium bombers off the aircraft carrier U.S.S. Hornet to conduct the first raid on the Japanese mainland of the war. In the scale of aircraft used and bombs delivered this raid could only be considered a pinprick. Nevertheless, the Japanese reacted by conducting a major offensive in the parts of China where these aircraft were destined, undertaking to invade the island of Midway, and stationing four fighter groups on the main islands to defend against further attacks. A puny raid resulted in the costs of a major offensive and led to the tide-turning defeat at Midway as well as tying up badly needed air assets. It seems unlikely that the massive B-29 campaign can be dismissed as having absolutely no effect.

Pape contends that "...in actuality the naval blockade, invasion threat, and Soviet attack ensured that surrender would have occurred at precisely the same time even if there had been no strategic bombing campaign."¹ In sum, the B-29 campaign, including the two atomic attacks had no effect whatsoever. He argues that the Japanese government did not have time to react to the first nuclear attack on August 6, 1945. Likewise, he discounts the effects of the second nuclear attack that occurred on August 9. Nevertheless, he contends that the Soviet attack, initiated in mainland China on August 9, was something the Japanese could react to in time to make the decision to surrender on that same day. It defies logic that the strategic bombardment and nuclear weapons did not affect the Japanese decision-making. Additionally, it seems likely that Soviet prior knowledge of the atomic bomb and the display of American willingness to use it could have affected the timing (and possibly even the likelihood) of their entry into the war.

¹ Robert A. Pape, *Bombing to Win, Air Power and Coercion in War*, (Ithaca: Cornell University Press, 1996) pg 135.

Case Study-Iraq

Pape's assessment of the Gulf War is that it is an example of air power induced coercion resulting in the achievement of partial goals. However, he argues that it was not the strategic decapitation campaign, but rather, the theater denial campaign that resulted in the achievement of one goal Hussein's willingness to leave Kuwait. Nevertheless, the air campaign was unable to achieve the second goal, the reduction of Iraqi military equipment. This required a ground war.

In denigrating the strategic campaign, Pape declares it a failure because it failed to kill, overthrow, or isolate Hussein or use the threat of these outcomes to coerce him to leave Kuwait. Certainly, there is no room to doubt that Operation Desert Storm failed to meet the first of these two goals. However the third goal and the threat of success are not so easily argued.

Pape claims that, while much of Baghdad's ability to communicate with its fielded forces was destroyed, the Coalition never destroyed disbursed command posts that possessed high frequency radio capability and it did not stop couriers. Therefore, it did not isolate the regime in Baghdad and hence it failed.

It is difficult to consider this a serious critique. No nation, forced to communicate with its fielded forces using couriers while fighting the most militarily capable coalition ever fielded, would not consider this an incredible disadvantage. Additionally, those couriers' effectiveness must have been degraded given Coalition control of the skies.

As for resort to high frequency (HF) radio communication, this has to be considered a major coalition success. The enemy's use of HF would have given the coalition a choice—deny the Iraqis communication by jamming, or intercept the HF transmissions. Either way, the ball lay squarely in the coalition's court.

In the course of his examination of the Gulf War, Pape forwards what he considers the key policy question which is whether air power has become so powerful that it can decide international disputes, not simply without costly ground campaigns but even without deployment of any credible ground threat? He sees the Gulf war as the first to use decapitation of leadership as a goal of the air campaign and considers that future conflict will result in a choice between bombing for decapitation and bombing for denial.

Written in 1996, Pope's prediction is fairly prescient of the debate leading up to and during the NATO intervention in Serbia. The predicted debate over the use of air power alone not only took place, but those who argued for it won out. As Pape predicted, the debate over how to run the air campaign took place as well. Lieutenant General Michael Short, the air component commander argued for a strategic campaign while General Wesley Clark, the overall commander, and an Army general, insisted on a denial campaign against fielded forces in Kosovo.

Where Pape's prediction loses some credibility is in its extremity. Kosovo was not a decision between a theater denial campaign and a strategic campaign. Both campaigns were undertaken. The only question was where to put the emphasis in the parallel campaigns.

Conclusion

Pape sums up his book by saying air power cannot coerce alone. This seems a supportable position. Even in Serbia, which some will argue was the first conflict won by air power, it is clear that air power combined with other factors such as the threat of ground action, isolation from their Russian allies, and NATO's demonstrated resolve.

He then goes on claim that strategic bombing does not work (although he softens that stance to strategic bombing being one of the least effective methods of coercion). However, this

contention is only convincing in the limited definition of effectiveness that Pape creates. What he demonstrates is that, over its first 60 years, strategic bombardment has not won a war single-handedly. There is little room for arguing this conclusion, especially pre-Kosovo. However, Pape, in his effort to analyze and quantify, doesn't pay adequate attention to the complexities of war and decision making. There is no single power that wins wars and, to all but possibly the social scientist, the question is what contributes to the successful prosecution of the war.

Warden's *The Air Campaign*

John Warden writes a more concise analysis. His aim is to provide a framework for planning and executing an air campaign at the operational level. He does this using historical examples to illustrate the uses of air power which he defines as air superiority, interdiction, and close air support.

The book begins with a discussion on air superiority in which Warden, in one of the opening paragraphs denies Pape hyperbolic superiority when he claims "no country has won a war in the face of enemy air superiority."² I expect the Vietnamese would be surprised to hear this.

Warden accepts that air superiority is the first goal and all other operations must be subordinated to its attainment. He goes on to recognize, however, that there may be exceptions where the ground campaign is in such a critical state that desperation may force higher priority to the close air support battle than to air superiority. Overall, this seems to be a balanced approach.

Warden then goes on to discuss his framework of five cases of war. He describes these as "Air Superiority" cases, but they are applicable throughout all aspects of the air campaign. The

² Colonel John A Warden III, *The Air Campaign, Planning for Combat*, (Washington: Pergamon-Brassey's, 1989), pg 10.

cases describe conditions ranging from the most advantageous where friendly rear areas are unreachable by the enemy while the enemy's rear area is vulnerable to friendly action through more neutral situations to the other end of the spectrum where the friendly forces are disadvantaged. Warden uses these cases to frame his discussion of offensive versus defensive operations.

As he discusses offensive operations, Warden forwards the idea of command and control as a target set, calling it an obvious center of gravity. This is Warden's early version of the decapitation campaign. In this discussion Warden makes a thoughtful, balanced, convincing argument for attacking command and control (C2).

He proposes three spheres of C2 vulnerability (information, decision, and communications) and gives historical examples of attacks against these. What he proposes is not the assassination of national leaders. Rather, it is actions like the previously discussed Doolittle Raid or British subterfuge as to the condition of their radar stations during the Battle of Britain that cause the enemy to react inappropriately that are considered attacks on the decision making sphere of C2.

In discussing centers of gravity, Warden emphasizes the need to understand the enemy. He takes the same approach to evaluating the enemy's doctrine when designing an opposing air campaign. It is interesting that he evaluates German World War II air doctrine as being designed to support a tactical air campaign. The results were that by 1944 all of Germany was vulnerable to Allied attack while American, British, and Russian rear areas and industrial centers were practically immune. Perhaps the results of this lack of ability to conduct a strategic campaign would make an interesting case study for Pape.

Warden next turns to the interdiction mission. He categorizes this mission into three subsets, distant interdiction, intermediate interdiction and close interdiction. Distant interdiction

is analogous to Pape's strategic interdiction while Warden's intermediate and close interdiction would fall into Pape's definition of theater interdiction. Both authors share some common conclusions. They acknowledge that interdiction closer to the combat will result in more timely effects on the front while interdiction closer to the source will take longer to have an effect. The difference in their opinions is in the effectiveness of the distant or strategic interdiction.

According to Pape, strategic interdiction is a wasted effort that will lead to the enemy using alternative sources, products or workarounds. Due to the time lag and the rapid nature of modern war, strategic interdiction will not have time to make a difference.

Warden, while opposing Pape's view and considering distant interdiction the method capable of the most decisive results, also suggests that if the war will be over before this interdiction can take effect, then it is a waste to conduct it. (He also warns that nothing is more difficult to predict than how long a war will last.)

Both authors get partial credit for their answers. As for Pape, the enemy may develop substitutes or workarounds, but these are not free, they carry some cost. Pape claims that interdiction in Korea failed because, for example, the Koreans put repair crews every four miles along the rail lines and could repair rail cuts in hours. Certainly the effort failed to totally deny the enemy supplies, but look at that cost. Crews every four miles? How many personnel did that entail? How much equipment and supplies? What would these people have been doing had they not been working on the railroad all the livelong day?

An additional consideration is the effect of the distant interdiction on the enemy's will. Consider an opponent that is facing the U.S. in a war they know they cannot win. Their goal is merely to draw some American blood and fight a reasonable battle or two. Just enough combat

to allow them to get the “I stood up to the Americans” merit badge. Assume this notional nation has an indigent capability to product tanks and other vehicles.

In the short, violent battles that loom, this nation’s ability to produce armor will have no effect. However, in the minds of the leadership, as they perform the calculus of when to end the fighting, there may be one. Surely they will be willing to fight longer and harder if they believe they can produce enough tanks to make up the losses in a year or two than they would if the U.S. destroyed their capability to manufacture tanks.

Warden spends regrettably little time discussing the strategic bombing campaign. Strategic interdiction is about the sum total he covers. This is regrettable and seems unusual. Perhaps, he intentionally excluded this topic as his aim was operational vice strategic. This distinction doesn’t seem feasible, as the operational air component commander should control all air power, including strikes on strategic targets. At any rate, conjecture aside, this is a regrettable shortfall in Warden’s book and deprives us of what would have likely been a lively difference in opinion between Pape and Warden.

After discussing the close air support role, which has been discussed previously, Warden moves on to the idea of air reserves. At first blush, this concept seems inappropriate. Conventional wisdom tends to lean toward “maximum efforts” and the belief that a sortie not flown is a sortie lost.

However, Warden makes a convincing argument, using the Battle of Britain as a historical example, that it is prudent to keep some reserve air power. The argument centers around having air power available to use over the long run and during periods of opportunity. For instance, when an enemy attack reaches a culminating point. Rather than both sides requiring time for a collective breather, the air reserves would be useful to take advantage of the enemy’s halt.

CONCLUSION

Pape and Warden wrote two books for significantly different audiences. Nevertheless, Pape in his treatise and Warden in his “how-to” book both present some very thought provoking aspects. The authors agree that the close air support and interdiction missions are important although their opinions diverge in many aspects of the details.

They agree in the importance of air superiority although Pape argues for the adequacy of local air superiority an idea Warden rejects. However, they vehemently disagree on the issue of leadership as a center of gravity.

Pape believes it is not only non-effective, but also seductive and may be pursued as a “silver bullet” to attack any policy problem vice a more effective means. Warden in his book advances leadership attack as a must-do. In his 1989 writing, however, Warden takes a broader and more balanced approach than is accredited to some of his later writings. The approach taken in this book is extremely convincing. Attacking leadership is a valuable tool. *The Air Campaign* illustrates that the most effective means of attacking enemy leadership may not be a projectile between the eyes. Rather than between the eyes, the enemy leadership’s center of gravity lies between the ears, having an effect on their thought process and ability to execute their campaign.

Both of these works merit recommendation to those whose business is national defense. In the end, Pape is more analytical, precise and scientific in his work. While this recommends his work highly to a political scientist, a policy maker or air power executor must approach his work carefully and critically.

War, in its entirety, is not easily analyzed, precise or scientific. To a large degree, and many would argue a predominate degree, war is an art. Enemy will react in unexpected ways and do unexpected things. Pape would argue he could tell you what they have done historically

and what they will do in the future. His work is insightful, but risks being as seductive as the air power theories he criticizes.

On the other hand, Warden's "how to" book on conducting an air campaign provides considerations and assistance, but, in the end, recognizes that "do the right thing" may be as useful as the advice gets. Warden argues that orchestration is the sine qua non of modern warfare. While he is discussing the relationship between air, land and sea power, his argument could just as effectively be made with the relationship between the different aspects of air power. An argument that is far more convincing than Pape's.